Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Directional Mechanosensing in Myosin VI YUBO YANG, RIINA TEHVER, Denison University — Myosin is a family of versatile motor proteins that perform various tasks, such as organelle transport, anchoring and cell deformation. Although the general mechanism of the motors has been fairly well established, details on dynamic aspects like force response of the motor, and force propagation are yet to be fully understood. In this poster, we present the response of the ATP binding region to force exerted on the tail domain in order to test the proposed tension-dependent gating mechanism of myosin VI processive motion. We employed the Self-Organized Polymer model in a computer simulation to explore the effect. Current results show that the ATP binding domain of myosin VI indeed exhibits tension dependence – both structurally and dynamically.

Riina Tehver
Denison University

Date submitted: 13 Nov 2012 Electronic form version 1.4